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Exploring cultures of feedback practice: The adoption of learning-focused feedback practices in the UK and Australia.

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Abstract

In recent years, there have been calls in the literature for the dominant model of feedback to shift away from the transmission of comments from marker to student, towards a more dialogic focus on student engagement and the impact of feedback on student learning. In the present study, we sought to gain insight into the extent to which such a shift is evident in practice, and how practice is shaped by national and disciplinary cultures. A total of 688 higher education staff from the UK and Australia completed a survey, in which we collected data pertaining to key influences on the design of feedback, and the extent to which emphasis is placed on student action following feedback. Our respondents reported that formal learning and development opportunities have less influence on feedback practice than informal learning and development, and prior experience. Australian respondents placed greater emphasis on student action following feedback than their counterparts in the UK, and were also more likely than UK respondents to judge the effectiveness of feedback by seeking evidence of its impact on student learning. We contextualise these findings within the context of disciplinary and career stage differences in our data. By demonstrating international differences in the adoption of learning-focused feedback practices, the findings indicate directions for the advancement of feedback research and practice in contemporary higher education.

Keywords: Formative assessment, assessment design, assessment cultures, cross-country comparison, learning effects

Introduction

Practice in assessment and feedback has been described as the sector's 'Achilles' Heel' (Knight, 2002, p. 107). Year on year, the results of institutional and national surveys of student satisfaction (such as the UK National Student Survey) demonstrate that assessment and feedback is the area of their experience with which students are least satisfied (Williams & Kane, 2009). This picture emerges against a body of literature demonstrating that high-quality feedback has the potential to have a stronger impact on students' learning than almost any other factor (e.g., Hattie, 1987). However, in parallel, research demonstrates variable, and in some cases minimal, engagement with and uptake of feedback on the part of students (e.g. Gibbs & Simpson, 2004; Hyland, 1998). Such challenges are not unique to the UK; concerns over student satisfaction with assessment and feedback are prominent in Australian higher education, where student responses paint a similar picture to those from the National Student Survey.

One common response to these concerns in both the UK and Australia has been to focus attention on the mechanics of the feedback process, in what is often conceptualised as a cognitivist approach to feedback (Ajjawi & Boud, 2017). For example, many universities have mandated maximum turn-around times for students to receive comments on completed assignments and have urged staff to give greater attention to the provision of detailed feedback. However, this emphasis on one-way communication of written feedback comments represents what Carless (2015) terms the 'old paradigm' of feedback practice; one where the actions of the giver of information in a process of transmission are the primary focus. Whilst such initiatives have led to some improvements in students' ratings of feedback in opinion surveys (Williams & Kane, 2009), they have not shifted assessment and feedback from its place as the most important concern in almost all institutions in both countries (Williams & Kane, 2009; Nash & Winstone, 2017).

Alternative responses have questioned whether the ways in which feedback was typically conceptualised might have contributed to the problem, at least in part. New emphases in the literature started to appear, with feedback being positioned as a form of formative assessment which leads to self-regulation (Nicol and Macfarlane-Dick, 2006), as an aspect of sustainable assessment which aims to build students' capacities to judge their own work (Carless, Salter, Yang & Lam, 2011), and as part of a dialogic process through which students learn to appreciate and produce good work (Nicol, 2010). Price, Handley and Millar (2011) espoused a view of the feedback process that moved away from the technicalities of delivery, towards a focus on student engagement with feedback. The most important part of this socio-constructivist view of feedback was to shift it from an act undertaken by teachers, to a process which had an effect on students that could be seen in their work (Boud & Molloy, 2013). This 'new paradigm' (Carless, 2015; also termed Feedback Mark 2 by Boud & Molloy, 2013) represented a very different way of thinking, with an expectation of students' active engagement with feedback information they receive, and a focus on the resulting improvements in subsequent tasks.

These two paradigms represent two very different '*feedback cultures*'; one where the student is a passive receiver of information, and one where they are a proactive recipient (Winstone, Nash, Parker & Rowntree, 2017). The latter approach results in a more sustainable assessment process (Boud, 2007) that develops skills of self-regulation (Carless et al., 2011) and promotes dialogue (Nicol, 2010). Increasingly, scholars in the area of assessment and feedback argue that it is time for an active, utilisation-focused model of feedback to supersede the transmission model (Jonsson, 2013; Nash & Winstone, 2017; Nicol, 2010; Price et al., 2011). Whilst we recognise that "feedback is clearly a complex, multi-dimensional rather than a simple, straightforward phenomenon" (Poulos & Mahony, 2008, p. 3), we focus here on this distinction between transmission-focused and learning-

focused approaches to feedback because this represents the key focus of current debates on the topic (e.g. Mutch, Young, Davey & Fitzgerald, 2018; Zhu & Carless, 2018).

Exploring feedback cultures

The processes of assessing and informing developments in students' work are necessarily situated within institutional, disciplinary, and national cultures. In turn, whether an individual educator aligns primarily with a transmission- or learning-focused model of feedback is likely to be influenced by a complex and dynamic interaction of the implicit and explicit messages about feedback to which they are exposed, their own beliefs, values and professional development, and institutional policies and procedures. We build upon Adcroft's (2011) discussion of 'mythologies' in the feedback process, which represent the nature of held beliefs about feedback. Adcroft argues that such beliefs vary according to the 'culture' in which one works.

According to Poulos and Mahony (2008), many universities appear to favour the transmission model, intentionally or unintentionally positioning students as passive receivers of information about their work. Indeed, many institutional learning and teaching strategies discuss feedback practice in terms of what educators should do, for example, how they should construct their comments (Nash & Winstone, 2017). One potential explanation for the dominance of the transmission approach in practice is that this approach has dominated the literature on assessment and feedback (Ajjawi & Boud, 2017), despite continuing shifts towards more learning-focused approaches to feedback (e.g. Nicol, 2010; Jonsson, 2013; Price et al., 2011 Carless, 2015; Winstone et al., 2017).

In a recent survey study, Mulliner and Tucker (2017) demonstrated that both staff and students almost unanimously recognise that the purpose of feedback is to facilitate improvement, and this shared emphasis on improvement is also reported in a recent Australian study (Dawson et al., 2018). Learning-focused approaches to feedback extend this emphasis towards practices where evidence of the impact of feedback on students' learning is sought. However, Ajjawi and Boud (2017, p. 252) argue that "approaches that follow through [feedback] comments to examine their effects – how they are received and acted upon – are limited".

A crucial feature of learning-focused feedback is that of design; it is essential that assessment is structured such that students have the *opportunity* to act upon feedback (Boud & Molloy, 2013). If feedback is given on a summative assessment at the end of a unit, the impact of this feedback on learning is limited (e.g. Hounsell, McCune, Hounsell & Litjens, 2008), and perhaps we should question whether this should be termed feedback at all (e.g. Taylor & Burke da Silva, 2014). Boud and Molloy (2013) argue for the importance of incremental and nested tasks that facilitate implementation of feedback so that feedback information can be directly applied to subsequent, similar tasks.

The present study

There is more than one way of conceptualising feedback; whilst a transmission-focused approach continues to dominate, newer approaches, focused on the effect of feedback on learning, have emerged in the literature. We sought to examine the extent to which these changes in thinking have permeated practices through exploration of the beliefs and practices of university teachers in both the UK and Australia.

We explore feedback practice in three ways. First, we consider the influences on teachers' feedback practice as potentially emanating from three sources: prior experience (e.g., drawing upon one's own experience as a student; Oleson & Hora, 2014); formal learning (e.g., through accredited programmes for new lecturers); and informal learning (e.g., gained from engaging with the literature, or through conversations with colleagues;

Thomson, 2015). We are interested in which of these has the greatest influence on teachers' feedback practices.

Second, we explore the extent to which changing feedback practices might be exhibited in assessment design; do staff design their assessments being mindful of students' opportunities for the application of feedback (Boud & Molloy, 2013)? Thirdly, we explore whether the impact of feedback on student learning is perceived to be an important dimension of its effectiveness.

In considering these three questions reflecting learning-focused feedback practices, we adopt a situational approach whereby we consider the potential influence of a teacher's discipline, career stage, and national context. An individual's discipline is considered the "primary cultural unit" in academia (Oleson & Hora, 2014, p. 42); thus, what constitutes 'effective' feedback is likely to differ by discipline (e.g., Gibbs & Simpson, 2005), and an individual's approach to assessment is likely to be influenced by the core epistemology of their discipline (e.g., Yorke, 2003). Similarly, career stage is also likely to influence beliefs and practices around assessment; in their study of feedback practice in Chinese academics, Wei and Yanmei (in press) demonstrate that the accumulation of teaching experience leads to the provision of feedback earlier within the learning cycle, and feedback addressing broader skills beyond a specific task. Finally, while the UK and Australia share many common features in higher education, they operate in different policy contexts and governmental regimes. In particular, quality assurance is a more recent development in Australia than the UK (e.g. Jarvis, 2014), which might lead us to expect differences in 'feedback cultures' across the two countries.

Thus, the present study sought to understand cultures of feedback practice in the UK and Australia, by addressing the following research questions:

1) What are the key influences on the design of feedback?
2) What emphasis is placed on student action following feedback?
3) How do the answers to these questions differ by country, discipline, and career stage?

Materials and Methods

Participants

A total of 688 Higher Education staff participated in the survey (see Table 1). Surveys were distributed to staff in two large Australian universities (N = 397) and a diverse range of institutions across the UK (N = 291). Academic staff comprised 92.1% of the UK sample and 89.9% of the Australian sample; the remaining respondents were non-academic staff involved in the assessment of student work or supporting the development of assessment practice. In the UK, respondents had the opportunity to be entered into a voucher prize draw upon completion of the survey.

INSERT TABLE 1 ABOUT HERE

Design and Materials

An online survey was designed to surface practices, attitudes and beliefs in the domains of assessment and feedback. In this paper, we focus specifically on items measuring influences on feedback practice and on student action following feedback. We adopted a between-subjects design in order to explore differences in responses according to country, discipline, and career stage. We utilised quantitative and qualitative survey methods, recognising that quantitative survey methods cannot capture the same richness of perceptions and practice as can qualitative methods (Mulliner & Tucker, 2017). However, it is also recognised that the

anonymity afforded by survey methods can lead to more honest responses (Mulliner & Tucker, 2017).

Influences on feedback design were measured using seven items representing the influence of prior experience, representing pre-existing knowledge and experiential learning (Own experience as a learner; comments from students; working with other staff members), formal learning and development opportunities, representing structured training sessions and courses (Qualification in education/ pedagogy; formal training in assessment/feedback), and informal learning and development opportunities, representing exposure to new ideas outside of structured learning opportunities (Reading books/articles on feedback; meetings discussing assessment/feedback). Respondents were presented with all seven possible influences and were asked to select as many as they felt had influenced the development of their own practice.

The extent to which individuals place emphasis on student action in response to feedback was assessed using two items. First, respondents were asked to rate on a scale from 1 (strongly disagree) to 5 (strongly agree) their agreement with the statement: "I specifically design follow up assessment tasks to allow students to enact the comments they receive in prior tasks". Second, we used an open-ended item to gain insight into the extent to which individuals seek evidence that their feedback has been utilised by students, by asking "how do you know whether your feedback is effective?".

Procedure

In both the UK and Australia, a favourable ethical opinion was granted by institutional review boards. In the UK, a link to the online survey was distributed across six Universities (three traditional 'research intensive' institutions, and three newer 'teaching focused' institutions), as well as via national mailing lists for academic staff. In Australia, the link to the survey was distributed via staff email lists in two large Universities (one Group of Eight 'research intensive" and the other more teaching oriented).

Results

All data were screened prior to analysis. Whilst some variables showed minor deviations from normality, the distributions were not believed to be problematic, due to the large sample size (Field, 2013). Nevertheless, as we were working with frequency data, and data that had been collected on Likert scales, non-parametric tests were applied. All analyses reported below incorporated Bonferroni-corrected alpha levels where appropriate to correct for the increased risk of Type I error as a result of multiple testing.

What are the key influences on the design of feedback?

Our first research question concerned the 'culture' of feedback practice within an individual's context, which might have the potential to influence the choices they make about how to design feedback opportunities and craft feedback comments[1]. As data were not independent and respondents could select as many of these influences that apply, the data in Table 2 represent the proportion of influences under each category that were reported by respondents to have influenced the ways in which they design feedback. Taking the sample as a whole, a Friedman test revealed that there was a significant difference between the three categories in terms of the extent to which they influence feedback practice ($\chi^2(2) = 136.49, p < .001$). Pairwise comparisons showed that formal learning and development was reported to have significantly less influence on feedback practice than informal learning and development ($p <$

[1] We found no differences in any of our variables according to institution type (teaching- vs. research-focused; all *p*s > .05); for the sake of brevity, this variable is not discussed further.

.001), and prior experience ($p < .001$). The reported influence of informal learning and development, and prior experience did not differ significantly ($p = .08$).

INSERT TABLE 2 ABOUT HERE

Breaking down the sample, these data were analysed using Mann-Whitney tests (country differences) and Kruskal-Wallis tests (discipline and career stage differences). There were no differences between respondents in the UK and Australia in terms of the impact of prior experience on feedback design ($U = 49{,}624, z = 1.71, p = .09, r = .07$), nor the impact of formal learning and development on feedback design ($U = 45{,}704, z = -.19, p = .85, r = -.01$). However, respondents in Australia reported a stronger influence of informal learning and development opportunities (e.g. reading books on feedback, learning through attendance at meetings where feedback is discussed) on their feedback practice than their counterparts in the UK ($U = 53{,}816, z = 3.91, p < .001, r = .16$).

In terms of discipline differences, there were no significant differences in the extent to which prior experience was reported to influence the design of feedback ($H(3) = 5.48, p = .14$). However, there were discipline differences evident in the influence of formal learning and development (e.g. qualification in pedagogy, formal training workshops), $H(3) = 17.81, p < .001$. Pairwise comparisons revealed that respondents from health and medical disciplines reported a stronger influence of formal training than respondents from STEM disciplines ($p < .001$) and Arts and Humanities disciplines ($p = .01$). There was also an overall discipline effect for informal learning and development ($H(3) = 11.54, p = .009$), where respondents from health and medical disciplines reported a stronger influence of informal training on their practice than those from STEM disciplines ($p = .04$).

There were no effects of career stage for either prior experience ($H(2) = .43, p = .81$) or formal learning and development ($H(2) = 4.50, p = .11$). However, the extent to which informal learning and development influenced feedback practice did differ according to career stage ($H(2) = 11.92, p = .003$). Pairwise comparisons revealed that respondents classified as being early in their career were significantly less likely to report that informal learning and development influenced their feedback practice than both mid-career ($p = .03$) and late career ($p = .002$) respondents.

What emphasis is placed on student action following feedback?

The first source of data that addressed this research question was respondents' report of the extent to which they specifically design assessment structures to enable students to apply feedback from previous assignments. The data were analysed using Mann-Whitney tests for country differences, and Kruskal-Wallis tests for discipline and career stage differences. Table 3 shows mean ratings for this item.

INSERT TABLE 3 ABOUT HERE

There was a significant country difference, with respondents in Australia reporting that they are more likely to design assessment to facilitate implementation of feedback than respondents in the UK ($U = 44{,}863, z = 2.50, p = .01, r = .10$). Significant discipline differences were also evident ($H(3) = 9.15, p = .03$), with respondents from Arts and Humanities disciplines reporting greater use of assessment design to facilitate use of feedback than their counterparts in STEM disciplines ($p = .02$). There was no effect of career stage, $H(2) = 5.83, p = .054$.

We also drew upon the open-ended item *"How can you tell whether your feedback is effective?"* because whilst it did not explicitly ask about whether respondents placed

emphasis on student action following feedback, it could provide insight into participants' implicit models of the importance of feedback for learning. In total, 682 respondents provided an answer to this question (UK: 285; Australia: 397). A coding framework was developed using an inductive iterative approach. An initial coding phase involved reading all responses in depth, noting any commonalities in responses. This was used to develop an initial coding scheme, which was then iteratively refined in a second coding phase. The final coding phase involved assigning relevant codes to each comment; any one response could be assigned more than one code. All responses fit the coding framework. Following initial coding by the first author, approximately 20% of responses (120) were independently coded by a second researcher. Inter-rater reliability was tested using Krippendorff's alpha (Hayes & Krippendorff, 2007); codes assigned by the two coders were identical for 93% of responses (Krippendorff's alpha = .95; 95% CI on α [.87, 1.00]). Due to the high rate of agreement between the two coders, the first coder's judgements were deemed acceptable, and discrepancies were not discussed further. Table 4 provides a description of each code, and an illustrative quote from participants' responses.

INSERT TABLE 4 ABOUT HERE

Following coding of the data, we analysed country, discipline and career stage differences using chi-square tests. However, because participants' responses could be assigned more than one code, and this violated assumptions of data independence, comparisons between individual codes utilised McNemar tests, which are suitable for related data[2].

First, we were interested in differences between the UK and Australia in the extent to which these codes were applied to participants' responses. Some responses reflected influences that are particular to one national context; for example, many UK respondents made reference to comments from moderators or external examiners as providing evidence about the effectiveness of their feedback, or claimed that they would know their feedback was effective if it conformed to guidelines such as those laid out by institutions as part of their enactment of the QAA UK Quality Code. This form of external accountability at the course-level is less prevalent in Australia. As figure 1 shows, for both Australian and UK respondents, the most common responses referred to evidence of what students say about the feedback (or don't say, in the case of minimal complaints as indicative of effective feedback), and evidence of what students do in response to feedback (such as changing their behaviour, or improving their work). As these two codes were the most prevalent, they form our focus for further analyses.

International differences emerged through McNemar tests of the most common sources of evidence for the effectiveness of feedback; whilst respondents in the UK cited evidence of what students say as being more important in determining the effectiveness of feedback than what students subsequently do ($\chi^2(1) = 12.98$, $p < .001$), the opposite was true for respondents in Australia. Here, respondents made more reference to evidence of learning and development in response to feedback than evidence of satisfaction from students when describing sources of information about the effectiveness of feedback ($\chi^2(1) = 18.27$, $p < .001$).

INSERT FIGURE 1 ABOUT HERE

[2] Whilst we recognise that our quantitative analysis of emergent codes limits in-depth exploration of responses, we are aware that full qualitative analysis of open-ended survey responses is in many cases inappropriate (LaDonna, Taylor & Lingard, 2018).

In order to explore discipline and career stage differences, again we focused on the two most prevalent codes: what students say, and what students do. As table 5 shows, significant disciplinary differences are evident for the number of responses making reference to what students do; McNemar tests confirmed that respondents in Arts and Humanities disciplines made significantly more references to what students do than what they say ($\chi^2(1) = 8.56$, $p = .003$). However, for all other disciplines there was no significant difference in the number of references to these two sources of information about the effectiveness of feedback, and there were also no career stage differences (table 6). However, McNemar tests did reveal that early career respondents made more reference to student action than student satisfaction ($\chi^2(1) = 6.13$, $p = .013$); there were no significant differences for mid or late career respondents.

INSERT TABLE 5 ABOUT HERE
INSERT TABLE 6 ABOUT HERE

Discussion

In recent years, the literature in assessment and feedback has called for the dominant transmission-focused approach to be replaced by a new paradigm which places emphasis on dialogue and student action following feedback. The primary aim of the present study was to explore the extent to which elements of this new paradigm were evident in the practices of educators in the UK and Australia, across a variety of disciplines and career stages.

We first asked how individual educators come to adopt particular practices; that is, what influences commonly exist within the culture of practice to which an individual is exposed? Our data suggest that formal learning and development opportunities, such as Postgraduate Certificate programmes or professional development courses, are less likely to influence practice than informal learning and development opportunities (reading articles/books, attendance at departmental meetings) and prior experience. Our findings thus reflect the broader literature on academic practice, where concern is expressed over the limited transfer of learning from formal programmes (e.g., Ginns, Kitay, & Prosser, 2010), and where the value of learning from others in the context of everyday practice, and through 'corridor conversations', is emphasised (e.g. Boud & Brew, 2013; Thomson, 2015). That prior experience emerges in our data as the strongest influence on pedagogic decision-making surrounding feedback is also in accord with evidence indicating that the strongest reported influences on academic practice are learning by 'doing', one's own experience as a student, and informal conversations (Knight, Tait & Yorke, 2006). A strong influence of prior experience, particularly one's own experience as a student, can lead to the dominance of what might be considered outdated practices, such as the didactic lecture (Oleson & Hora, 2014). Thus, we can speculate that the heavy influence of prior experience may be one reason for the continuing dominance of transmission-focused approaches to feedback.

The dominance of prior experience in our data was consistent across countries, disciplines and career stages; however, informal learning opportunities (e.g. learning from the literature and from informal discussions in meetings) were reported as a stronger influence on feedback practice in Australian respondents, and in those in the mid- to late-career stages. We would echo Trowler and Knight (2000, p.39) in advocating "the creation of as many opportunities as possible for informal discussions and shared work", where academics from all career stages are encouraged to view conversation as a mechanism for transforming pedagogic practice (Thomson, 2015). From our data, it appears that academics are more likely to be exposed to ideas around learning-focused feedback from working with and talking to colleagues, and from their own reading of the literature, than from formal training opportunities.

Disciplinary cultures influence the repertoire of pedagogic practices from which one draws (Olseon & Hora, 2014); in our data, those from Health and Medical disciplines seemed to be the most heavily influenced by both formal and informal learning opportunities. In terms of the former, it is perhaps significant that many of those working in health and medical disciplines may have to abide by ongoing professional development requirements. Nevertheless, the fact that informal learning was also a strong influence on practice in these disciplines suggests that professional development is also strongly situated in everyday practice. Given that discipline is described as the "primary cultural unit" in higher education (Oleson & Hora, 2014, p. 42), more detailed exploration of 'feedback cultures' within and across disciplines is an important direction for research.

Next, we were interested in the extent to which we could see respondents placing emphasis on student action within their feedback practice, a hallmark of the new paradigm. Australian respondents were more likely than UK respondents to report that they design assessment tasks to facilitate student action and engagement, and were also more likely to seek evidence of the impact of their feedback in assessing its effectiveness than their UK counterparts. These two findings are likely to be related; Australian respondents may be more likely to seek evidence of the impact of feedback because they are more likely to design assessment with this in mind. In stark contrast to respondents from Australia, respondents in the UK focus far more heavily on what students say, that is, their satisfaction and verbal comments, when seeking evidence of the effectiveness of feedback. In this way, then, it appears that practice in Australia, at least in the sample studied here, is more closely aligned with the new paradigm than practice in the UK.

One explanation for these international differences might relate to the model of feedback most commonly held by respondents. Placing greater emphasis on the impact of feedback is representative of a learning-focused approach to feedback, whereas a strong emphasis on student satisfaction (together with greater reference to external and peer review as indicators of the effectiveness of feedback) is indicative of an accountability model. Given that our Australian respondents were more likely than their UK counterparts to report that informal learning was an influence on their feedback practice, it is possible that Australian respondents 'picked up' the importance of designing assessments to facilitate use of feedback from meetings or from their own reading of the literature.

Second, it is important to consider that just because respondents in the UK showed a greater focus on what students say about feedback as evidence of its effectiveness, this does not mean that they do not also look for evidence of its impact on students. Instead, the stronger focus on verbal rather than behavioural responses might merely demonstrate that what students say about feedback is the *most important* source of evidence for the UK respondents. Thus, our findings could be mirroring important elements of the local feedback culture, where external accountability influences, such as a culture of league tables and the gaze of the external examiner are more prevalent in the UK than in Australia (e.g. Jarvis, 2014). Whilst we offer some speculative interpretations of these intriguing international differences, our data highlight the importance of studying national 'cultures' of feedback when considering how research on feedback can inform practice.

Interpretation of our data should also acknowledge that the present study was exploratory and different sampling methods were adopted in the UK and in Australia; respondents in Australia came from two specific institutions, whereas a more diverse range of institutions were represented within the UK sample. Thus, the two Australian institutions from which we sampled participants may not be representative of the wider sector, and those who chose to complete our surveys many be more interested in feedback than the general population. Nevertheless, in both countries, sampling captured both research-intensive and teaching-oriented universities.

Conclusion

We conclude by making some tentative suggestions for the advancement of feedback practice on the basis of our findings. First, given the strong influence of prior experience and informal learning on feedback practice, it may well be important for 'champions' of learning-focused feedback to share their practices through informal discussions within their schools and departments. Future research that explores disciplinary, institutional and national cultures of feedback practice is likely to contribute to our understanding of how best to facilitate professional development in feedback practice.

Second, whilst a hallmark of learning-focused feedback is an emphasis on the impact of feedback, how exactly to assess this impact is not well understood, and gaining a nuanced understanding of how the effects of feedback can be detected in subsequent behaviour and work is a crucial future research endeavour. This will enable us to build on growing recognition of the importance of designing feedback practices so that teachers can determine whether key issues in their comments have been taken up in subsequent work, and facilitate the development of a 'feedback culture' where seeking evidence of the impact of feedback is the norm.

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Table 1. Demographic characteristics of sample, shown as percentage of total sample in UK and Australia.

		Country	
		UK	Australia
Gender	Male	39.4	36.7
	Female	60.6	63.3
Age % of sample	17-19	0	0.8
	20-24	0	1.3
	25-29	3.4	9.6
	30-34	8.9	14.9
	35-39	13.7	12.1
	40-44	13.1	12.6
	45-49	12.7	13.9
	50-54	22	10.8
	55-59	11.7	12.6
	60+	14.4	11.6
Discipline	Arts & Humanities	17.9	27.7
	Health & Medical Sciences	10.9	30.9
	Social Sciences	33.7	20.1
	STEM	37.5	21.4
Career Stage	Early Career (5 or fewer years experience)	23.6	29.7
	Mid Career (5-15 years experience)	33.1	45.4
	Late Career (16 years or more)	43.3	24.8

Table 2. Influences on the design of feedback. Data represent the proportion of each type of influence which was reported to impact on practice, by country, discipline and career stage.

			Nature of Influence		
		N	Prior Experience	Formal Learning and Development	Informal Learning and Development
Country	UK	268	.61 (.32)	.42 (.39)	.55 (.34)
	Australia	344	.66 (.30)	.41 (.39)	.66 (.33)
Discipline	Arts & Humanities	142	.67 (.31)	.38 (.39)	.66 (.33)
	Health & Medical Sciences	137	.66 (.33)	.53 (.40)	.66 (.34)
	Social Sciences	146	.63 (.32)	.42 (.39)	.58 (.35)
	STEM	175	.61 (.29)	.35 (.37)	.57 (.31)
Career Stage	Early Career	161	.63 (.31)	.39 (.37)	.54 (.33)
	Mid Career	240	.65 (.31)	.45 (.39)	.63 (.33)
	Late Career	193	.64 (.32)	.39 (.40)	.65 (.35)

Table 3. Mean (SD) ratings of assessment design to enable action on comments, by country, discipline and career stage.

		N	Assessment Design to Enable Action
Country	UK	272	3.04 (1.33)
	Australia	295	3.31 (1.18)
Discipline	Arts & Humanities	130	3.44 (1.18)
	Health & Medical Sciences	117	3.13 (1.20)
	Social Sciences	142	3.16 (1.34)
	STEM	168	3.00 (1.26)
Career Stage	Early Career	135	2.99 (1.26)
	Mid Career	226	3.31 (1.22)
	Late Career	190	3.17 (1.28)

Table 4. Coding framework.

Code	Description	Illustrative quote
What students say	Evaluate the effectiveness of feedback by focusing on student comments (either via formal evaluation surveys or through unsolicited comments). A further source of information taken as evidence of the effectiveness of feedback can be a lack of complaints following the release of feedback.	*"Student satisfaction – no/few complaint emails received"* (Australian respondent)
What students do	Evaluate the effectiveness of feedback by seeking evidence of a change in student behaviour/competency/awareness as a result of enacting the feedback comments.	*"Improvement in subsequent assessments, comments in class showing students have learnt from things I've pointed out to them"* (Australian respondent)
Design follow up	Evaluate the effectiveness of feedback through follow-up tasks/assessments that have been especially designed to enable students to enact feedback. A further source of follow up is to create opportunities for dialogue around feedback, or to look back at comments students have been given on previous work to see if they have been implemented.	*"In some units we have designed tasks that 'build' on the previous task. We often see improvements over the semester"* (Australian respondent)
Peer review	Evaluate the effectiveness of feedback through comments received by colleagues or moderators within own institution. Such information can also	*"Feedback from unit chair"* (Australian respondent)

	be gained by looking at others' feedback for comparison against one's own.	
External review	Evaluate the effectiveness of feedback through comments received by or external examiners or through external quality audits	*"Our external examiners comment on the quality of feedback"* (UK respondent)
Reflection/ experience	Evaluate the effectiveness of feedback by drawing upon one's own experience as an academic or by scrutinising one's own practice.	*"By reflecting on whether it's clear, focussed, constructive and user-friendly"* (UK respondent)
Guidelines/ principles	Evaluate the effectiveness of feedback according to whether it aligns with guidelines and principles for effective feedback, which may be set by the department/faculty/institution, or may be held personally by the individual as a result of engaging with the literature on assessment and feedback.	*"I tend to follow the guidelines set by the Faculty to ensure there are always constructive points to feed forward"* (UK respondent)
Not possible to know	*Expression of a belief that it is difficult or impossible to know whether feedback has been effective.*	*"I don't think it is possible to know if the feedback has been useful, or if it is being used appropriately by the students" (UK respondent)*

Table 5. Percentage of responses reflecting what students say and what students do as sources of information about the effectiveness of feedback, by discipline.

	Arts & Humanities	**Health and Medical Sciences**	**Social Sciences**	**STEM**	**Chi square**
What Students Say	41.9%	46.7%	46.5%	49.4%	$\chi^2(3) = 1.72, p = .63$
What Students Do	61.8%	48.9%	41.7%	42.3%	$\chi^2(3) = 14.88, p = .002$

Table 6. Percentage of responses reflecting what students say and what students do as sources of information about the effectiveness of feedback, by career stage.

	Early Career	**Mid Career**	**Late Career**	**Chi square**
What Students Say	38.4%	48.5%	49.5%	$\chi^2(2) = 5.24, p = .07$
What Students Do	54.7%	49.8%	42%	$\chi^2(2) = 5.77, p = .06$

Figure 1

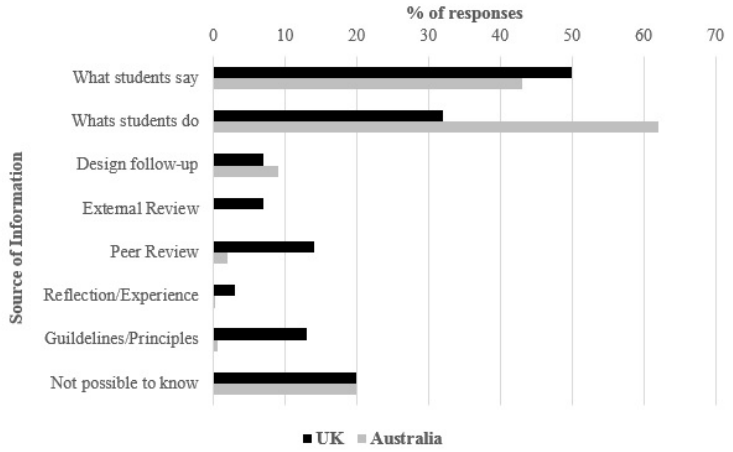

Figure Captions
Figure 1. Percentage of responses reflecting each code, by country.